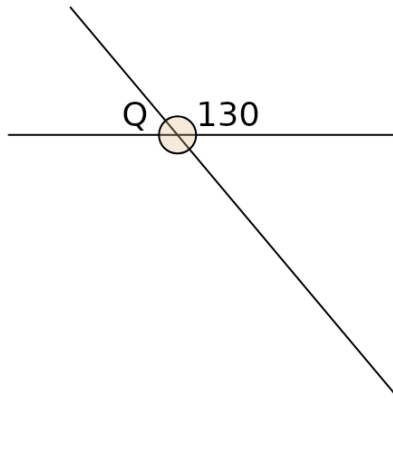


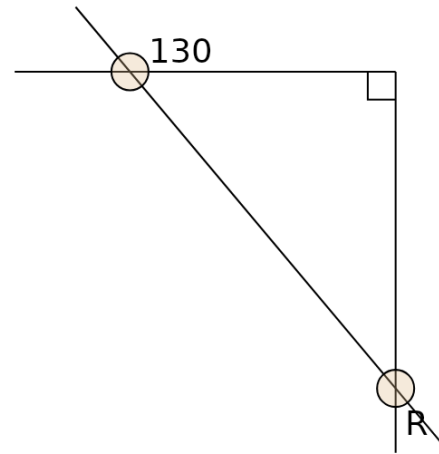
Geometry and Spatial Reasoning

1 What do we know about angle 'Q'?



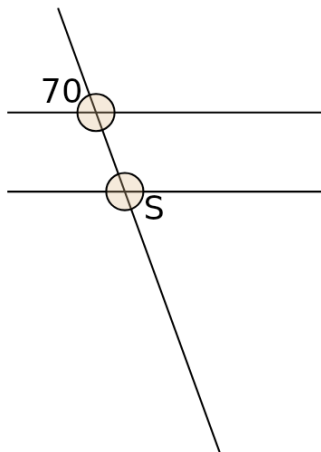
A 40	B 60	C 140
D 50	E 130	F 45

2 What do we know about angle 'R'?



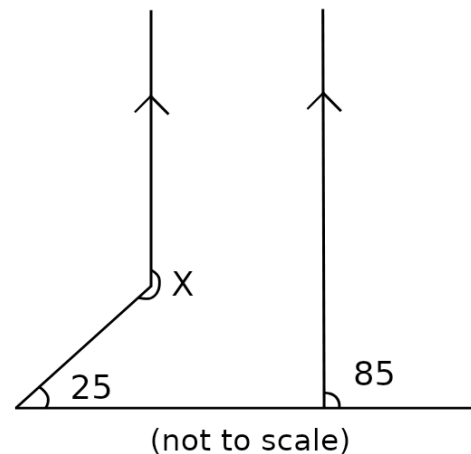
A 50	B 45	C 140
D 60	E 130	F 40

3 What do we know about angle 'S'?

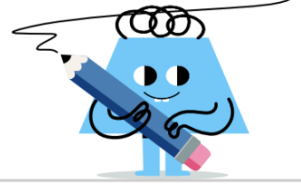


A 90	B 70	C 160
D 60	E 20	F 110

4 What is angle X?



A 225	B 215	C 220
D 240	E 260	F 265



Geometry and Spatial Reasoning

- 5 Find the value of 'a' in this equation

$$a^2 + b^2 = c^2$$

$$a = ?$$

$$b = 6$$

$$c = 10$$

A $a = 11$

B $a = 8$

C $a = 4$

D $a = 12$

E $a = 60$

F $a = 5$

- 6 Approximate the value of 'c' in this equation

$$a^2 + b^2 = c^2$$

$$a = 12$$

$$b = 13$$

$$c = ?$$

A $c = 13.5$

B $c = 19.4$

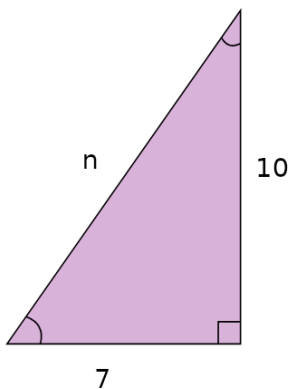
C $c = 156$

D $c = 5$

E $c = 21.1$

F $c = 17.7$

- 7 Find the length of the missing side as a decimal value based on the Pythagorean theorem



A $n = 7.14$

B $n = 14.73$

C $n = 10.53$

D $n = 8.85$

E $n = 15.57$

F $n = 12.21$

- 8 Approximate the value of 'c' in this equation

$$7^2 + 12^2 = c^2$$

A $c = 16.4$

B $c = 13.9$

C $c = 9.7$

D $c = 14.7$

E $c = 10.5$

F $c = 84$

- 9 Find the radical (square root) for the value of 'c' in this equation

$$a^2 + b^2 = c^2$$

$$a = 13$$

$$b = 10$$

$$c = ?$$

A $c = \sqrt{369}$

B $c = \sqrt{69}$

C $c = \sqrt{269}$

- 10 Find the value of 'a' in this equation

$$a^2 + 5^2 = 13^2$$

A $a = 14$

B $a = 12$

C $a = 11$

D $a = 8$

E $a = 10$

F $a = 15$

- 11 Find the value of 'c' in this equation

$$a^2 + b^2 = c^2$$

$$a = 6$$

$$b = 8$$

$$c = ?$$

A $c = 12$

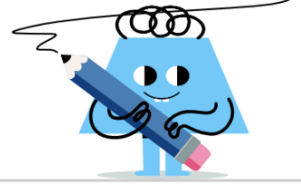
B $c = 48$

C $c = 10$

D $c = 8$

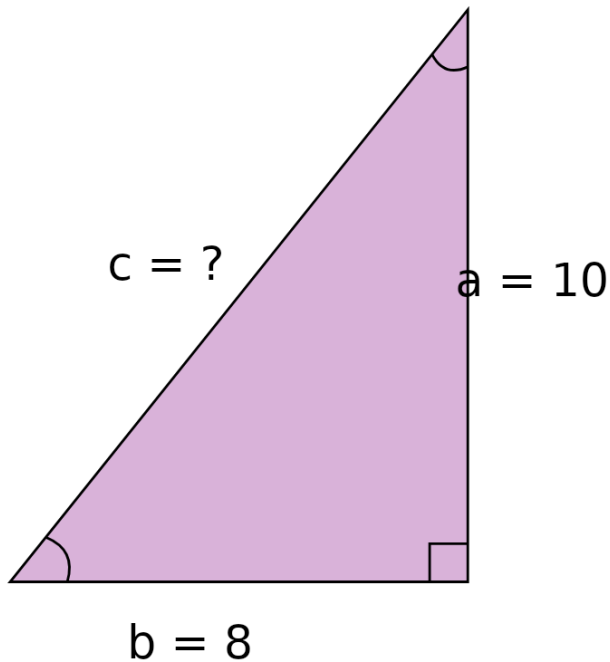
E $c = 6$

F $c = 11$



Geometry and Spatial Reasoning

12 Find the length of the missing side as a square root value, based on the Pythagorean theorem: $a^2 + b^2 = c^2$



A

$$c = \sqrt{36}$$

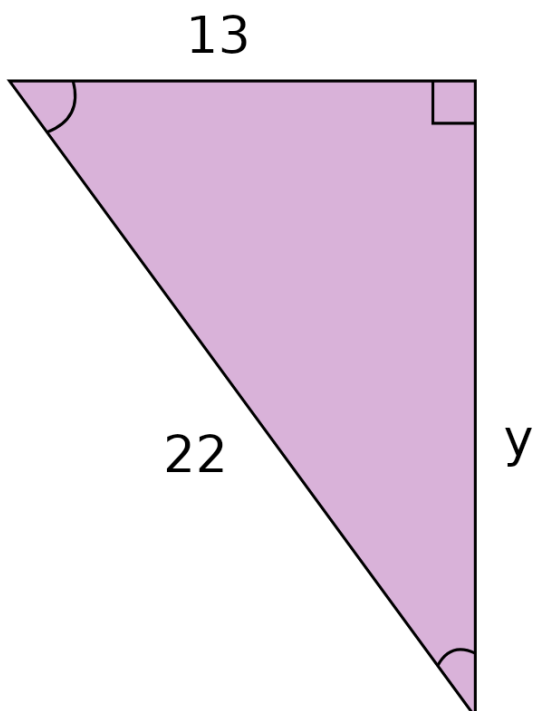
B

$$c = \sqrt{292}$$

C

$$c = \sqrt{164}$$

13 Find the length of the missing side as a square root value, based on the Pythagorean theorem



A

$$y = \sqrt{1,621}$$

B

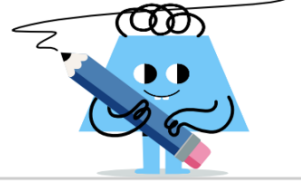
$$y = \sqrt{1,283}$$

C

$$y = \sqrt{799}$$

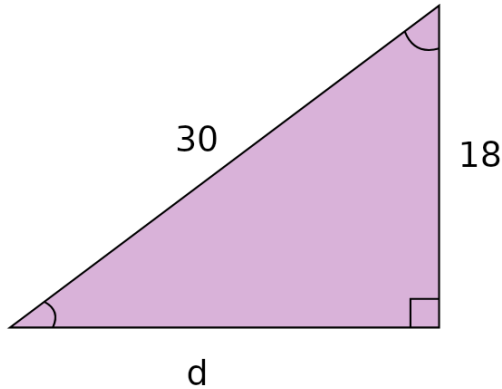
D

$$y = \sqrt{315}$$



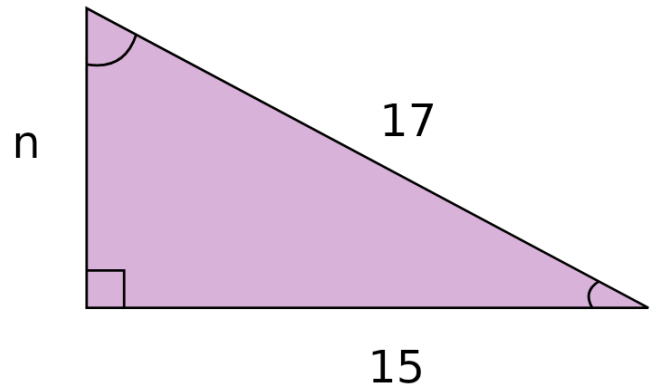
Geometry and Spatial Reasoning

- 14** Find the length of the missing side as a decimal value based on the Pythagorean theorem



- | | | |
|-------------|-------------|-------------|
| A
$d=24$ | B
$d=26$ | C
$d=17$ |
| D
$d=31$ | E
$d=29$ | F
$d=34$ |

- 15** Find the length of the missing side as a decimal value based on the Pythagorean theorem



- | | | |
|--------------|--------------|---------------|
| A
$n=9.6$ | B
$n=4.8$ | C
$n=11.2$ |
| D
$n=8$ | E
$n=32$ | F
$n=4$ |

- 16** Find the value of 'c' in this equation

$$5^2 + 12^2 = c^2$$

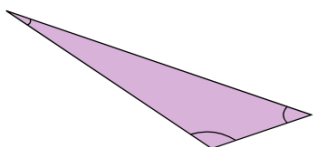
- | | |
|---------------|---------------|
| A
$c = 14$ | B
$c = 13$ |
| C
$c = 60$ | D
$c = 12$ |
| E
$c = 9$ | F
$c = 15$ |

- 17** Find the radical (square root) for the value of 'b' in this equation

$$a^2 + b^2 = c^2$$
$$a = 2$$
$$b = ?$$
$$c = 3$$

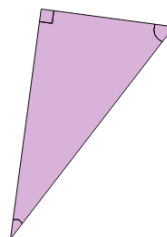
- | | |
|----------------------|----------------------|
| A
$b = \sqrt{23}$ | B
$b = \sqrt{14}$ |
| C
$b = \sqrt{13}$ | D
$b = \sqrt{5}$ |

- 18** Name the type of triangle based on its angles: Acute = all angles less than 90° , Right = one right angle, Obtuse = one angle more than 90°

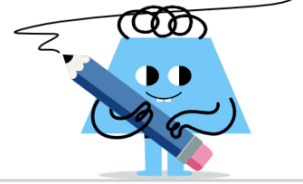


- | |
|-------------------|
| A obtuse triangle |
| B acute triangle |
| C right triangle |

- 19** Choose the right description of the triangle based on its angles

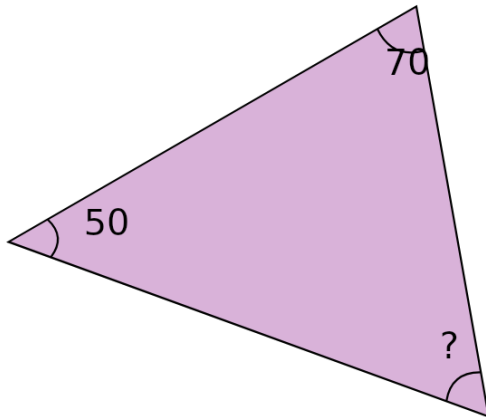


- | |
|---------------------------------------|
| A One angle is more than 90° |
| B One angle equal to 90° |
| C All angles are less than 90° |



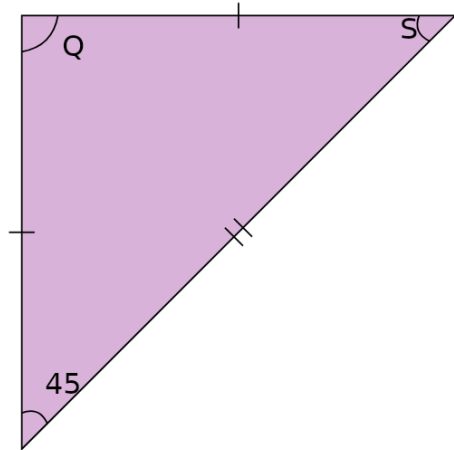
Geometry and Spatial Reasoning

20 Find the missing angle of the triangle given that the interior angles must add up to 180°



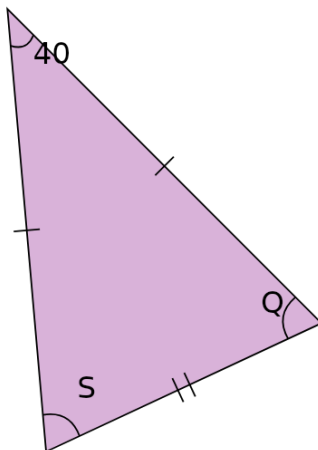
A 50	B 90	C 60
D 80	E 70	F 30

21 What do we know about angle 'Q'?



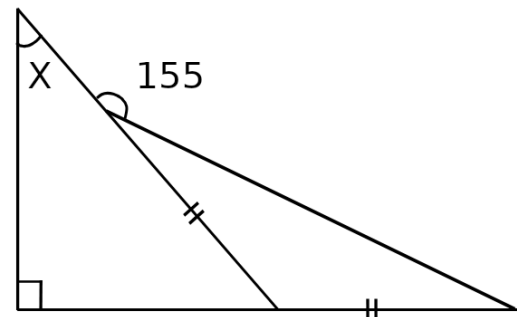
A 60	B 55	C 70
D 45	E 90	F Unable to answer

22 What do we know about angle 'S'?



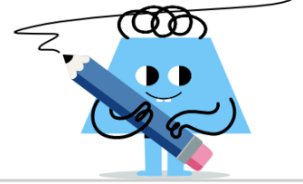
A 60	B 70	C 50
D Unable to answer	E 45	F 55

23 What is angle X?



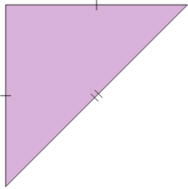
(not to scale)

A 45	B 60	C 40
D 50	E 30	



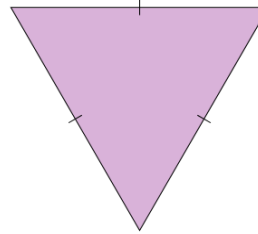
Geometry and Spatial Reasoning

- 24** Name the type of triangle based on its sides: Equilateral = 3 identical sides, Isosceles = 2 identical sides, Scalene = all different sides.



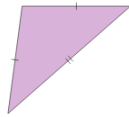
- | | |
|---|-------------|
| A | equilateral |
| B | scalene |
| C | isosceles |

- 25** Choose the right description of the triangle based on its sides



- | | |
|---|--|
| A | Two sides are the same length and one is different |
| B | All sides are the same length |
| C | All sides are a different length |

- 26** In geometry, what's the name for a triangle where two sides are the same length and one is different?



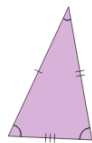
- | | | | | | |
|---|-----------|---|-----------|---|-----------|
| A | Idiomatic | B | Intervene | C | Isosceles |
| D | Infinite | E | Ithaca | F | Island |

- 27** Choose the type of triangle based on its description

All sides are a different length

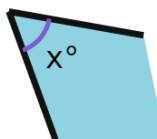
- | | | | |
|---|-------------|---|---------|
| A | isosceles | B | scalene |
| C | equilateral | | |

- 28** What would the sum of the inside angles on this shape be?



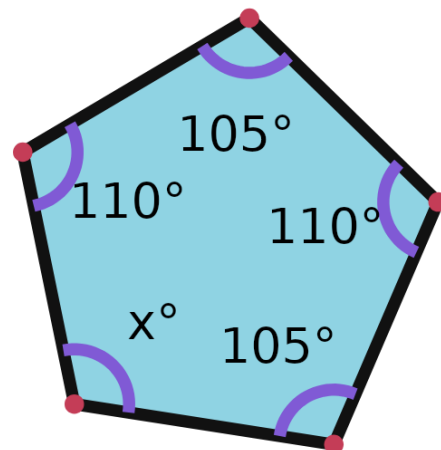
- | | | | | | |
|---|------|---|------|---|------|
| A | 120° | B | 240° | C | 60° |
| D | 150° | E | 180° | F | 210° |

- 30** This is a regular triangle. What is the interior angle?

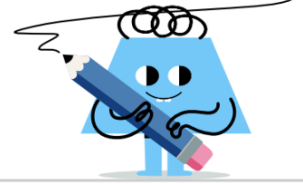


- | | | | | | |
|---|------|---|------|---|-----|
| A | 60° | B | 108° | C | 90° |
| D | 135° | E | 120° | | |

- 29** What is the missing interior angle?

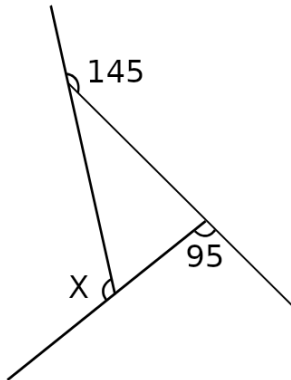


- | | | | | | |
|---|------|---|------|---|------|
| A | 50° | B | 170° | C | 130° |
| D | 150° | E | 90° | F | 110° |



Geometry and Spatial Reasoning

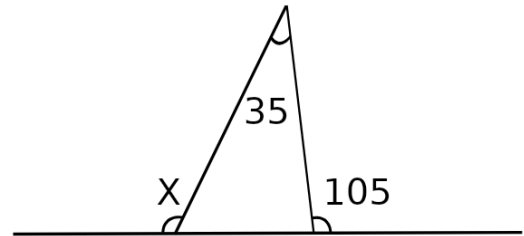
31 What is angle X?



(not to scale)

A 135	B 100	C 115
D 120	E 130	F 95

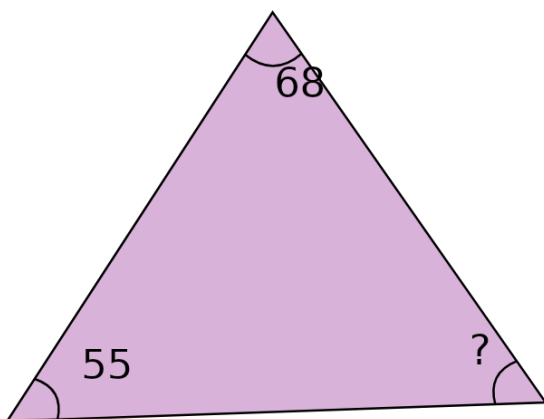
32 What is angle X?



(not to scale)

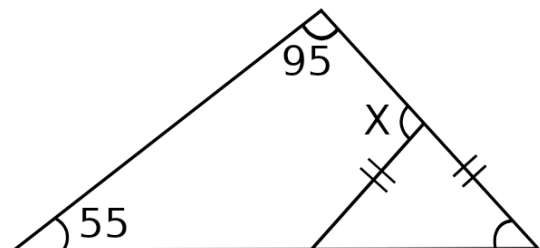
A 115	B 95	C 110
D 135	E 125	

33 Find the missing angle of the triangle given that the interior angles must add up to 180°



A 27	B 50	C 42
D 57	E 87	F 80

34 What is angle X?



(not to scale)

A 85	B 65	C 50
D 45	E 60	